Ron Fuller, Chief Electrical Inspector

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Stakeholder Meetings

We encourage you to attend the electrical stakeholder meetings beginning this month. Again, the department is offering 4 Continuing Education Unit credits (CEU's) for those who attend the meeting and successfully complete a take-home examination. Discussion will include the new RCW, proposed WAC rule revisions, purchasing electrical work permits online, and a question and answer period.

	Stakeholder Meeting Schedule <u>www.wa.gov/lni/electrical</u>	
11-08-00	Tumwater—L&I Auditorium, 7273 Linderson Way, Tumwater, WA	7-9 PM
11-09-00	Aberdeen—L&I Service Location, 415 W Wishkah, Suite 1B, Aberdeen, WA	7-9 PM
11-15-00	Vancouver—Clark Co PUD, 1200 Fort Vancouver Way Fl 3, Vancouver WA	7-9 PM
11-16-00	White Salmon—Work Source Bldg, 107 W. Jewett Blvd., White Salmon, WA	7-9 PM
11-29-00	Longview—Cowlitz Co PUD, 961 12 th Longview, WA	7-9 PM
01-31-01	Tacoma —Moore Branch Public Library, 215 S 56 th St., Tacoma	6:30-8:30 PM

New Chief Electrical Inspector Appointed

Ron Fuller has accepted the permanent position of Chief Electrical Inspector for the State of Washington. Ron has been filling the position as the acting chief since January 2000. He has been with the Department of Labor and Industries electrical program for over 10 years. He has been involved in the electrical construction industry for 28 years. Ron brings many skills and extensive electrical experience to the job of Chief Electrical Inspector.

Telecommunications Inspections

The department's commitment to the telecom industry is to require permits and inspections to address the <u>safety issues</u> in telecom installations. The department agreed to avoid creating any unnecessary obstacles. The statute established the telecom inspection threshold at a higher level than for regular electrical installations:

RCW 19.28.470 Inspections (1) The director shall require permits and require an inspector to inspect all installations of telecommunications systems on the customer side of the network demarcation point for projects greater than ten outlets. However:

- (a) All projects penetrating fire barriers, passing through hazardous locations and all backbone installations regardless of size shall be inspected;
- (b) All installations in single-family residences, duplex residences, and horizontal cabling systems within apartment residential units, including cooperatives and condominiums, do not require permits or inspections;
- (c) No permits or inspections may be required for installation or replacement of cord and plug connected telecommunications equipment or for patch cord and jumper cross-connected equipment...

The safety issues addressed in legislative testimony were: proper support of cables, cables penetrating fire-rated construction (barriers), cables suitable for the installation environment, mandatory working clearances in front of other electrical equipment, grounding when required of the telecom systems, and installations passing through hazardous locations. The department will focus its safety inspection efforts on these aspects of telecom work.

We will not inspect for system performance/design criteria that are detailed in the telecom standards adopted by the statute. Although these standards apply to all

telecom installations, the department's inspectors will inspect only the mechanical and safety aspects of the telecom backbone and horizontal cabling systems.

Although a job may be below the inspection threshold and not require a permit and inspection (e.g. residential telecom installations), the installation standards (NEC and EIA/TIA) still apply to all the work done. The person performing telecom work on the customer side of the service provider network demarcation point work must work for a telecom contractor licensed under chapter 19.28 RCW.

Rule revisions are <u>proposed</u> to clarify the definition of telecommunications outlets, the maximum number of cables associated with an outlet, and continuing addition of outlets over time:

WAC 296-46A-900 Electrical work permits and fees.

- (12) ... For the purposes of determining the inspection threshold for telecommunications projects greater than ten outlets, the following will apply:
 - (a) An outlet is the combination of jacks and mounting hardware for those jacks, along with the associated cable and telecommunications closet terminations, that serves one workstation. In counting outlets to determine the inspection threshold, one outlet must not be associated with more than six standard four-pair cables or more than one twenty-five-pair cable. Therefore, installations of greater than sixty four-pair cables or ten twenty-five-pair cables require permits and inspections...
 - (b) The installation of greater than ten outlets and the associated cables along any horizontal pathway from a telecommunications closet to work areas during any continuous ninety-day period requires a permit and inspection.

Documented Safe Switching Procedures

The Electrical Currents, May 1999, discusses when, with safe switching procedures, multiple feeders or branch circuits may supply installations under single management. The safe switching procedure must address disconnection of power to a building for maintenance and emergency situations. The safe switching procedure must be available <u>at the time of inspection</u> and include:

- A list of names of all those who are trained in the safe switching procedure for the disconnection of all
 power to the building in question. In some cases, this may include the disconnection of backup or
 emergency generation supplies to the building. At least one of these trained persons needs to be
 either on-site or on-call 24 hours a day 365 days a year. If on-call and not on-site they must be able to
 report to the site immediately when called.
- The procedures must be written, explaining the location of all disconnecting means and their order to be disconnected. If this procedure includes emergency generation systems, it must explain in detail the conditions under which the emergency system may be taken off line. Such systems may be critical in an emergency for the evacuation of the facility, fire fighting, etc.
- All disconnecting means must be clearly indicate with identification plates what they control and the
 location of all other disconnects for the building. Example: "1 of 3 disconnects for building A, other 2
 disconnects located in panel to the right." These identification plates need to be permanent and
 durable.

A safe switching procedure is <u>not</u> the "lock-out, tag-out" procedure needed to fulfill other safety requirements, but it may include "lock-out, tag-out" training requirements and procedures in the documentation.

Code Question of the Month

The answer to last month's code question is (B) in the elevator machine room. NEC 620-22(b).

This month's question: May a feeder consisting of <u>paralleled conductors</u> be installed in two different types of metal conduit, such as **IMC and rigid steel?**